19

- the processor is capable of (i) receiving either the first signal or the second signal from the sensor, and (ii) causing the actuator to act on the planar assembly in accordance with either the first or second states.
- 12. A portable electronic device, comprising:
- a first part that carries a display,
- a second part that carries an input device; and
- a solid-state hinge assembly coupled to the first part and the second part in a manner that allows relative angular movement between the first part and second part, 10 wherein the solid-state hinge assembly includes:
  - a bending medium capable of (i) bending in response to an applied force, and (ii) providing a resistance to movement in accordance with an amount of the bending; and
  - a force actuator coupled to the bending medium and located within one of the first part or the second part, the force actuator capable of providing the applied force.
- 13. The portable electronic device of claim 12, wherein: 20 the first part is a lid; and
- the second part is a base capable of supporting the lid.
- 14. The portable electronic device as recited in claim 13, wherein:

the lid further carries a camera assembly and a speaker 25 assembly; and

the input device is a keyboard.

- 15. The portable electronic device as recited in claim 14, wherein the force actuator is capable of providing:
  - (i) a first force corresponding to a first angular displace- 30 ment between the lid and the base; and
  - (ii) a second force corresponding to a second angular displacement between the lid and the base, wherein the first and second angular displacements are different from each other.
- 16. The portable electronic device as recited in claim 15, wherein:

20

the first angular displacement corresponds to a first angle suitable for the display presenting visual content; and the second angular displacement corresponds to a second angle that is suitable for the input device.

17. A method of operating an adjustable bending structure that includes a stack of layers of bendable material capable of bending in response to an applied force, wherein the adjustable bending structure (i) is in communication with a sensor capable of detecting a shape of the stack of layers and providing a signal, and (ii) is in communication with an actuator capable of receiving the signal and responding by applying a controller force that controls the shape of the stack of layers, the method comprising:

receiving, by the actuator, a first signal provided by the sensor, the first signal corresponding to a first controller force;

applying, by the actuator, the first controller force such as to cause the stack of layers to take on a first shape;

receiving, by the actuator, a second signal provided by the sensor, the second signal corresponding to a second controller force; and

applying, by the actuator, the second controller force such as to cause the stack of layers to take on a second shape that is different than the first shape.

18. The method of claim 17, wherein when the controller force is a null force, the shape of the stack of layers corresponds to an uncompressed state, otherwise, the shape of the stack of layers corresponds to a compressed state.

19. The method of claim 17, wherein the first controller force corresponds to the first shape and the second controller force corresponds to the second shape.

20. The method of claim 17, further comprising: providing varied number of interleaved layers at different locations of the stack of layers to adjust a relative stiffness.

\* \* \* \* \*